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GEOGRAPHIC SCHOOL BULLETINS

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(The National Geographic Society is a scientific and educational Society, wholly altruistic, incorporated as a non-commercial institution for the increase of geographic knowledge and its popular diffusion. General Headquarters, Washington 6, D. C.)

January 28, 1946. Vol. XXIV. No. 16.

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Dorothy Hosmer

ON RHODES, THREE MODERN GRACES GREET VISITORS

The three graces of Greek mythology were Aglaia (Brilliance), Euphrosyne (Joy), and Thalia (Bloom). But for their extreme youth and tattered clothes, these three smiling Rhodian girls might be the ancient graces personified. They live in Embona, a town of Orthodox Greek Christians, high in the mountains of Rhodes, largest of the Italian Islands of the Aegean (commonly known as the Dodecanese Islands). People of this village, in greeting strangers, spit in the direction of the visitor and exclaim, "Mashala," an Arab-Turkish expression of admiration and respect (Bulletin No. 3).

GEOGRAPHIC SCHOOL BULLETIN

HOW TEACHERS MAY OBTAIN THE BULLETINS

The Geographic School Bulletins are published weekly throughout the school year (thirty issues) and will be mailed to teachers in the United States and its possessions for one year upon receipt of 25 cents (stamps or money order); in Canada, 50 cents. Originally entered as second-class matter January 27, 1922; re-entered as of April 27, 1943, Post Office, Washington, D. C., under Act of March 3, 1879. **Copyright, 1946, by National Geographic Society, Washington 6, D. C. International copyright secured. All rights reserved. Quedan reservados todos los derechos.**

The Nile, Source of Egypt's Fertility, Also to Supply Power

EGYPT, in one of its first steps toward postwar development, is planning a powerful hydroelectric plant for the Aswân Dam. This barrier, nearly a mile and a quarter long, regulates the Nile at the First Cataract, just south of Aswân, capital of Egypt's southernmost province. The dam is 590 rail miles south of Cairo, at the Nile's Delta.

When power flows from Aswân to Egypt's cities and farms, the African kingdom will increase its indebtedness to the Nile. This beneficent stream has been the very life of the country—under Pharaohs, Ptolemies, and today's kings. The mighty river creates, in the midst of utterly barren desert, a wide, green, marvelously fertile valley in which long-staple cotton and crops of grain can be harvested three times a year.

The Nile Compares with the Mississippi in Size and Drainage Area

This fertility is possible because of a phenomenal flood—a flood bringing not ruin but riches. The silt-laden waters originate in Ethiopia more than 1,000 miles to the south and every summer inundate the ribbon of Egyptian land bordering the Nile. After flood waters subside a rich loam sediment is left in the troughlike valley and flat delta. Since the building of the Aswân Dam and three barrages across the lower Nile, controlled year-round irrigation has partially replaced the Egyptians' traditional dependence on the annual flood.

Second in length only to the Mississippi-Missouri river system, the Nile extends through 35 degrees of latitude, flowing through or, by its tributaries, draining areas in the Belgian Congo, Ruanda Urundi, Tanganyika, Kenya, Uganda, Ethiopia, Eritrea, the Anglo-Egyptian Sudan, and Egypt. The Nile River basin has an area of 1,082,000 square miles, slightly less than the Mississippi basin.

Estimated to be 4,000 miles long, the Nile was considered divine by Egyptians who dedicated a temple to it. On Roda, an island near Cairo, flood waters are measured by an ancient Nilometer. This simple calibrated column of stone stands opposite the spot where, according to tradition, Pharaoh's daughter rescued Moses from the bulrushes. When the Nilometer shows that the river is 25 feet above its normal level, festivals are held. When the flood exceeds 25 feet, it is disastrous rather than beneficial (illustration, next page).

The Nile's source was a subject of scientific dispute for centuries. It is now known that the Blue Nile, originating in the Ethiopian mountains, is responsible for the flood and alluvial deposits. West of the Blue Nile flows the White Nile whose mother stream is the Kagera, a river formed by mountain streams in Tanganyika and Ruanda Urundi, Belgian mandate territory adjacent to the Belgian Congo. The White Nile can be considered to start with the Kagera and then to flow through lakes Victoria and Albert, eventually reaching Khartoum in the Anglo-Egyptian Sudan. There it is joined by the Blue Nile.

Temple of Isis Nearly Covered by Dammed Waters

From Lake Albert to Khartoum the Nile is navigable with great difficulty. The channel is almost obliterated by "sudd," dense plant growth which chokes the waters. Downstream from Khartoum (north) as far as Aswân the Nile is broken by a series of six cataracts, although there are long stretches of smooth water between them. A Sudanese railway between Wadi Halfa and Khartoum carries

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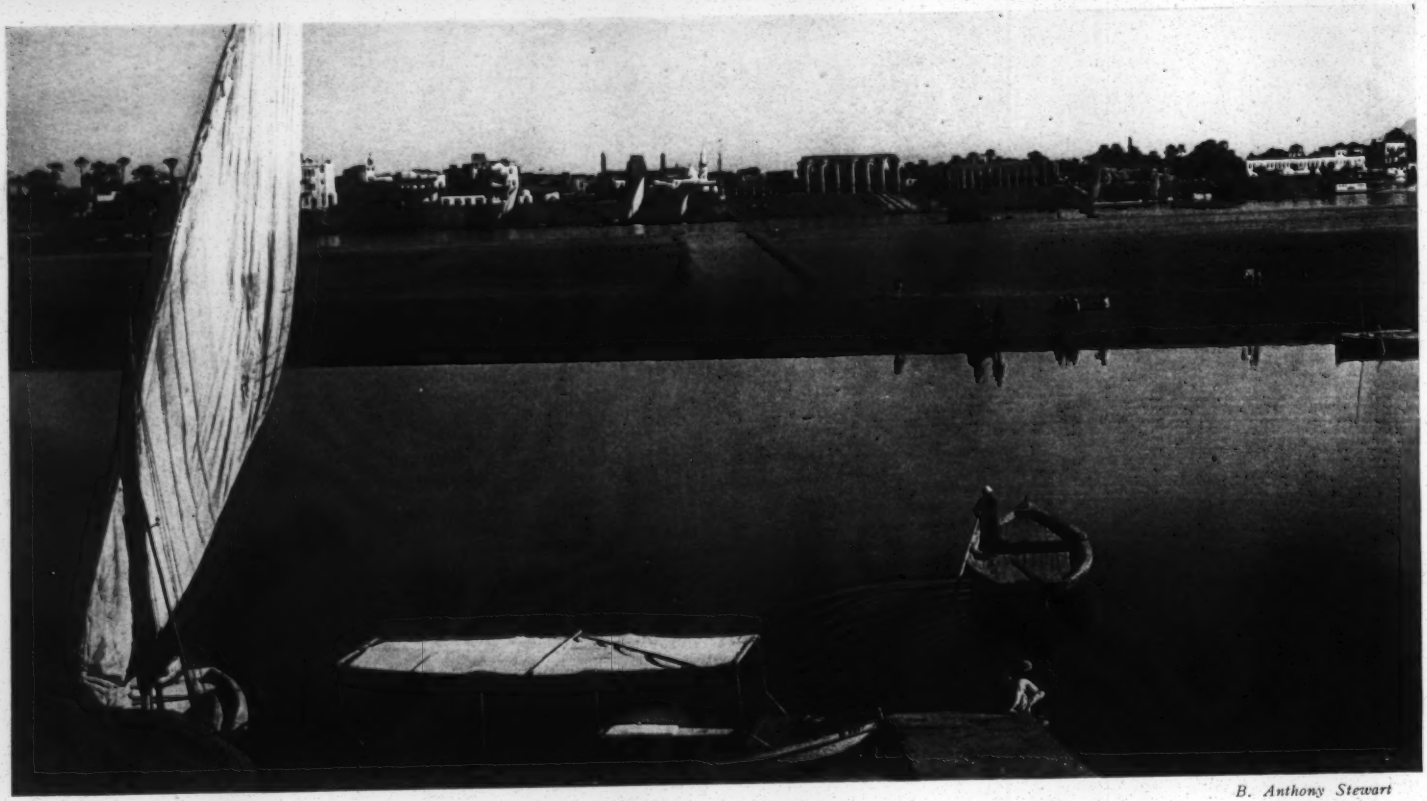

B. Anthony Stewart

LUXOR TEMPLE, BUILT 33 CENTURIES AGO, SHARES WITH MODERN HOTELS THIS RESORT TOWN ON THE NILE

The ancient embankment along Luxor's waterfront keeps the Nile's summertime flood from the city, but the flat island is completely covered. Canals, diverging from the river far upstream, irrigate a fertile strip a mile or two wide on each bank. Beyond the canals rise the arid brown hills of the desert. The tombs and temples of ancient Thebes lie at the foot of the hills two miles behind the ferry jetty in the foreground. Downstream (left) from Luxor is Karnak with its great Temple of Ammon. Peacetime travelers crowded Luxor's hotels: the white building at the extreme right, and the structure partially hidden by the felucca's sail (Bulletin No. 1).

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General Headquarters, Washington 6, D. C.

Austria, First Nazi-Conquered State, Resumes National Role

RECOGNITION by the U. S. State Department of the provisional government of Austria gives acceptance to a regime that has existed with Soviet sanction since April, shortly after the liberation of Vienna by Russian troops.

Austria, resuming its place among nations, is a central European land surrounded by such diverse peoples as Czechs, Croats, Germans, Hungarians, Italians, Slovakians, Slovenes, Swiss, and Tyrolese. The country was the object of the Nazis' initial aggression.

Served by the Brenner Pass and several other cuts through the Alps, and astride the Danube River, Austria has many commercial and natural advantages. It is one of the most mountainous countries in Europe. Even with the inclusion of the many small level patches of pasture in Alpine valleys, less than half of the land is usable for the the growing of crops and for grazing.

Mountains Attracted Crowds in Summer and Winter

Much of the mountain area is heavily forested. Before the war, the United States purchased thousands of tons of wood pulp from Austria. Other natural resources of the mountains are iron, copper, and other minerals. The deposits, however, have been very little developed. The government has been counting on exchanging iron ore for much-needed coal and coke from Czechoslovakia.

Austria's scenery and winter sports were exploited in the mountainous regions to a greater extent than were the minerals. In peacetime, thousands of visitors came to such charming Alpine villages as Dornbirn, Kitzbühel, and St. Anton—for the scenery and cool breezes in summer, and to ski down their snowy slopes in winter. Salzburg attracted crowds every summer to its music festival.

So strong is the lure of Austria's Alpine scenery (illustration, next page) that it was profitable to run railway excursions without disclosing destinations. Regular trains climbed to heights of more than 4,000 feet. Cable railways pulled sightseers up to two-mile elevations.

Vienna, the capital city, was a prewar mecca, drawing more visitors than the popular mountain resorts. With close to two million residents, Vienna included more than a quarter of the people of Austria. The city had a million residents as early as 1875, when city populations of a million were rare.

Vienna Was Once Europe's Eastern Frontier

The gay capital, with its music and romance, sounded the keynote for Austria throughout the world during the 18th and 19th centuries. Vienna was then the home of Beethoven, Brahms, and Gluck. There Liszt studied and reached the pinnacle of his popularity. Other native celebrities were Mozart, Haydn, Schubert, and the Strausses, father and son.

Many of the half-million annual visitors to the capital were attracted by its museums and its concerts, but the city owed its growth and prosperity primarily to its location and the trade which it brought. For centuries Vienna was on the eastern frontier of European civilization where roads converged from Bohemia, Silesia, and the Adriatic Sea. In the early days, goods from the East were carried up the Danube River to Vienna's merchants.

Even after the beginning of World War II, shipments to Vienna's river port by the war-swollen Danube fleet continued in large volume. This traffic was so

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passengers past five of the cataracts.

The Aswân Dam, about 500 air miles from the Mediterranean, is five times as long, and one-fifth as high as Boulder Dam. Completion of the dam created a hundred-mile-long lake which covered the sites of many villages. Above the dam, during the annual flood, can be seen only the roof of the 60-foot-high Temple of Isis. The rest is under water.

From Aswân to the Mediterranean the Nile is navigable by large boats which, before the war, carried thousands of tourists every year. At Thebes, known as "the world's greatest graveyard," many of Egypt's famous kings and queens are buried in gorgeously decorated tombs. Across the river, Luxor (illustration, inside cover), a city favored by travelers, offered the best in hotel accommodations and obliging dragomen (interpreter-guides).

Prewar travelers gliding along the Nile saw stately village girls come to the river's edge, draw water, and carry it away in vessels held on their heads. Children in tiny boats constructed of oil tins paddled along with their hands and hoped to receive money thrown from steamers. Egyptian sailboats, with their single, graceful sails, darted about the larger vessels. Along the shore architectural remnants of former mighty civilizations filled travelers with wonder. Beyond El Giza on a clear day they could see the famous Giza pyramids.

Cairo, capital of Egypt and largest city in Africa, is situated on the right bank of the Nile. Although greatly modernized, the city is distinctly Oriental. An important Moslem education center, Cairo has many mosques whose towers make a zigzag of the skyline.

Nine miles below Cairo the Nile divides into the two main branches of its delta. This area is referred to as "the Garden of Egypt" and is a maze of small streams and canals watering rich farm land. The Nile enters the Mediterranean on the west at Rosetta, and on the east at Damietta. Both of these towns were commercially important until the opening of the Suez Canal and the development of Port Said and Alexandria.

Willard Price

ASWAN, LIKE CAIRO, HAS ITS ANCIENT NILOMETER

Notches measure the exact height of the annual flood, telling Egyptians whether it is "bad Nile" or "good Nile." Either too high or too low is bad, but an amazing natural uniformity of the flood, plus modern engineering control, assures good Nile nearly every year.

Note: The Nile is shown on the National Geographic Society's Map of Africa. A price list of maps may be obtained from the Society's headquarters, Washington 6, D. C.

See also "War Meets Peace in Egypt," in the *National Geographic Magazine* for April, 1942; and "Daily Life in Ancient Egypt," October, 1941.

Bulletin No. 1, January 28, 1946.

GEOGRAPHIC SCHOOL BULLETIN

Published Weekly by

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General Headquarters, Washington 6, D. C.

Problem Areas of Europe: 4. The Dodecanese Islands

(This is the fourth of a series of nine articles about disputed areas in Europe.)

IN THE blue Aegean Sea between Turkey and Greece, 25 to 150 miles northeast of the Greek Island of Crete, lie the islands long known as the Dodecanese.

When Italy seized the group from Turkey in 1912, it became merely the most recent conqueror of these strategic islands that straddle the sea lanes between the main body of the Mediterranean and the Black Sea. Other owners of all or various islands of the group have been ancient Greece, Rome, the city-states of Venice and Genoa, the Knights of St. John, and Turkey.

"Dodecanese," Derived from the Greek, Means "Dozen"

Just as the islands have had many masters, so they have had many names, both individually and collectively. The name Dodecanese is a misleading one geographically, historically, and numerically. Both Turkey and Greece have at various times applied this name to islands, some within and some without the limits of the area so called today. The islands of Rhodes, Coo (Cos), and Lisso, members of the prewar political unit set up by Italy, were never before in history considered part of the Dodecanese. And finally, the word Dodecanese, derived from the Greek, means dozen, while there are today 14 islands in the enlarged cluster.

Greek, Turkish, and Italian names for individual islands appear on some maps. Many recent charts designate the Dodecanese the "Italian Islands of the Aegean," and use Italian spellings because Italy, as the ruling power, established the official nomenclature. However, historic Greek names show through this modern veneer: examples—Rhodi, Rhodes; Lero, Leros.

Turkey conquered the islands in 1523, and they were under Turkish rule with a few minor breaks until 1912. History shows that the region developed under the influence of Greek civilization. In modern as well as in ancient times the islanders, for the most part, have been of Greek blood, and the Greek language has predominated.

Castelrosso Added to Italian Group in 1924

The 14 main islands are, in order of their size: Rhodes, Scarpanto (Carpathos), Coo, Calino, Stampalia, Lero, Caso, Simi, Piscopi, Patmo, Nisiro, Calchi, Lisso, and Castelrosso.

Ikaria, one of the Dodecanese while Turkey was in control, was united with Greece in 1912. The Island of Lisso, formerly identified as a dependency of Lero, was separated for administration when the Italians took over. Castelrosso came into Italy's hands by cession from Turkey in 1924.

The value of the Dodecanese Islands is in their position. After the islands came under the control of Italy, the government encouraged colonization with Italian farmers, and introduced modern agricultural methods and machinery.

Nature endowed the islands with an almost ideal climate. Sunshine bathes the land the year round. Temperatures rarely fall below freezing, and average from 65 degrees to 75 degrees in summer. Rainfall is heavy in winter. From April to October warmth and dryness are the rule. The islands are virtually free of mosquitoes and malaria. Tempestuous winds occasionally sweep over island waters, driving small craft to shelter and dispersing fleets of sponge and fishing boats.

Islanders Keep Bees, Fish for Sponges, Catch Octopuses, Raise Crabs

Living on a combined area less than that of Rhode Island, much of it rocky and barren, the 141,000 islanders face difficult living conditions. The chief export of the islands has been people. Islanders have sought their fortunes in Australia, in Argentina, and in the United States. A colony of Greek sponge fishers, transplanted from the Aegean, has long operated at Tarpon Springs, Florida.

At home, islanders make a frugal living by keeping bees, raising sheep and cattle, producing butter and cheese, growing fruit and vegetables, and making sweet wines and brandies. They quarry limestone and marble for building use, work small iron and silver mines, dig pumice and gypsum, catch octopuses and squid. They fashion potter's clay into distinctive shapes, make silk goods and carpets, and process and market sponges.

For diversion there are cock fights and harvest festivals. Pilgrimages to island monasteries are occasions for travel from one island to another in flag-decked skiffs.

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heavy that Germany was compelled to improve dock facilities at the Austrian cities of Krems and Linz, farther upstream, to relieve congestion at Vienna.

The nation's food has normally been paid for by the trade of Vienna, the textiles and machinery output of Linz, the steel production of Steyr and Judenburg, and the exports from Salzburg and other industrialized cities of north and east Austria. The Danube valley has grown grain, potatoes, turnips, grapes, and sugar beets. The dairy industry has satisfied the country's needs. But mountainous Austria has always had to import much of her food.

After the 1938 annexation, the heavy industries of Austria were greatly expanded to serve Germany's war needs. Oil production at Zisterdorf increased.

Austria was deprived of all non-Germanic lands following World War I, and was left with an area of 34,000 square miles—about equal to that of Maine. The country extends east and west for about 325 miles, from Lake Constance (Boden See) on the Swiss border to Neusiedler See, a small lake on the Hungarian frontier. It had a prewar population of about seven million. Except for Vienna, Austria had no very large cities—Graz, the second city, had about 150,000; next in size, Linz had fewer than 110,000; and Innsbruck had 60,000.

Note: Austria appears on the Society's Map of Germany and Its Approaches.

For further information, see "A Tale of Three Cities," in the *National Geographic Magazine* for December, 1945; "This Was Austria" (18 photographs), July, 1945; and "Austrian August—and September," April, 1938*; and, in the GEOGRAPHIC SCHOOL BULLETINS, April 23, 1945, "Soviets Reach Once-Great Austria." *(Issues marked with an asterisk are included in a special list of Magazines available to teachers in packets of ten for $1.00.)*

Bulletin No. 2, January 28, 1946.

Kilophot

CLOUD-DRAPED MOUNTAINS PRESS HALLSTATT TOWARD THE LAKE

For lack of level ground, Hallstatt's balconied buildings press close together up steep slopes between lake and mountain. Although it lies in the Salzkammergut, Austria's prewar playground, Hallstatt's chief claim to fame is based on something more ancient than winter sports. Relics found there in an ancient burial ground were the first to be identified as belonging to the early Iron Age, which, consequently, was called the "Hallstatt period." The town represents many eras. Silhouetted against the mountains, the spire of a 19th century church casts its reflection on the lake; higher up the slope rises a church built in the 15th and 16th centuries.

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General Headquarters, Washington 6, D. C.

Cadmium, Jack-of-All-Trades Metal, Returns to Civilian Use

AFTER three and a half years in the service, cadmium has doffed its uniform and donned overalls. This versatile mineral normally performs one of the most diversified jobs of any metal.

Harder than tin, but softer than zinc, cadmium is prized for its ability to work with other metals. It teams up with them in soft solders and fusible alloys, is bonded with them in bearings and dental fillings, and shields them from corrosion by a rust-resisting plated film. Ductile and malleable, this metal can be drawn into thin wire, rolled into thin sheets, or hammered into foil. Bluish white in color, it takes a high polish. Bend a sheet of it, and it emits the characteristic crackling "cry" of tin. Its low melting point has been brought into industrial services to detect and fight fire—factory sprinkler-systems for example.

Overcoat for Rust-prone Iron and Steel

Foe of rust and corrosion from salt water and alkalis, cadmium provides a protective overcoat for many iron and steel products. Plating uses range from simple articles stocked by home workshops to parts of extremely complex mechanical devices.

Workaday wares that have long had a coating of cadmium are bolts, nuts, screws, nails, rivets, and washers. Fishing-tackle fittings, bicycle parts, metal toys, and buttons for work clothes have had their cadmium touch in common. Builders' hardware (locks, hinges, fixtures, and the like) and industrial hardware (chains, pulleys, hose couplings, filters, and such) share the metal's saving touch.

Every field of mechanical and engineering progress had made use of the anti-corrosive quality of cadmium—a virtue heavily underscored by war. In peacetime, cadmium is spread thinly, but effectively, over exposed parts of electrical equipment, office and household appliances, textile machinery, farm implements, and fire-fighting apparatus. It has prolonged the life of measurement and control devices, radio, telephone, and telegraph parts, and the vitals of engines for planes and automobiles.

Readiness to cooperate with other metals has been put to work in cadmium-based bearings for automobiles, aircraft, and marine engines. Graphite filled with cadmium makes an oilless bearing lining.

Cadmium Usually Keeps Company with Zinc

When wartime need for tin threatened its elimination from solders and started a search for low-tin or tinless formulas, cadmium's low fusing point gave it recognition as a serviceable substitute. Collapsible tubes and low-carat gold alloys take some cadmium.

A small addition of the metal to trolley and telephone wires adds strength and wear-resistance. In the aircraft industry it serves as an alloy ingredient for thin-walled tubing fitted to plane interiors by bending. Although bluish white itself, cadmium yields red and yellow pigments. Some compounds are used in photographic films, and in electrolytic solutions for metal plating.

Known since 1817, cadmium is rarely found alone. Usually it occurs in company with zinc, and is recovered in the smelting of zinc ore. The flue dust collecting on the cones of the retorts of zinc smelters is mixed with coal, then distilled and redistilled until cadmium appears.

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The biggest city in the islands is Rhodes (Rodi) with about 27,400 prewar dwellers. Other sizable communities are Calino, population 15,200; Coo, with 9,800 people; and Simi, with 6,100.

Thickly crusted with legends, myths, and history, each of the islands has its special appeal to interest. Rhodes was the headquarters of the crusading Knights of St. John from 1310 to 1523. The evidence of their occupation still stands in ancient walls and stone barracks along the Street of the Knights where lived the "tongues" or companies, the national groups into which the force of knights was divided.

Coo a Birthplace of Medicine; Hippocrates Born There

Centuries earlier great Roman orators were trained in the Rhodes school of rhetoric, among them Cicero, Cato, Cassius, and Brutus. The island was the site of the gigantic bronze statue of Apollo, "The Colossus of Rhodes," which stood at the harbor entrance and ranked as one of the seven wonders of the ancient world.

Mountainous Scarpanto has the greatest variety of minerals. Coo, green and picturesque, is the site of a temple to Asclepius, Greek god of medicine, and reputed birthplace of Hippocrates, "father of medicine." Calino, land of honey, has the Cavern of the Seven Virgins. Stampalia has been distinguished for the quality of its sponges. Flat and fertile Lero is valuable for its spacious Bay of Lekki, developed by the Italians as a naval base.

Butter is the stock in trade of Caso. Simi is the home of expert shipbuilders and sponge divers. Ancient ruins are scattered over Piscopi, source of medicinal salves and herbal unguents. St. John the Evangelist lived on Patmo, where, it is believed, he had visions that he recorded in the Book of Revelations. A monastery on the island bears his name.

Round and wooded Nisiro is known for its hot springs and high volcanic cone. Fragments of a time-stained Greek acropolis stand on Calchi. Lisso's sole tie with the outside world has been the exportation of dried octopuses and squid. Tiny Castelrosso, crowned with the old red-stone fortress that gave it its name, and with more houses than families, looks abroad for some of its income. It produces charcoal for burning tobacco in Egyptian narghiles, smoking devices by which the smoke is drawn through water

Houses for Dowries

The reason Castelrosso has fewer houses than inhabitants is partly that a house must be a part of every girl's dowry. When a daughter is born, the father starts building her house. Until they are married, girls are kept indoors except for one day a year—a custom probably based on near-by Turkey's seclusion of women during the sultans' rule. The one day the girls are allowed out is May Day, when they take water jars, go to the town cistern, and carry "good omen" water to their father's houses. Emigration also accounts for many of Castelrosso's empty homes.

Note: The Dodecanese Islands are shown on the Society's Map of Central Europe and the Mediterranean.

For additional information, see "Rhodes, and Italy's Aegean Islands," in the *National Geographic Magazine* for April, 1941*; and in the GEOGRAPHIC SCHOOL BULLETINS, October 11, 1943, "Dodecanese Knew War's Havoc, Medicine's Healing"; and "Italy's 'Baker's Dozen' of Dodecanese Islands in the Aegean," January 6, 1941.

Bulletin No. 3, January 28, 1946.

GEOGRAPHIC SCHOOL BULLETIN

Published Weekly by

THE NATIONAL GEOGRAPHIC SOCIETY

(Founded in 1888 for the Increase and Diffusion of Geographic Knowledge)
General Headquarters, Washington 6, D. C.

War Helped as Well as Hindered Scientific Discovery in 1945

WAR limited the scope of scientific expeditions and archeological research in 1945, but in some places it was actually a help rather than a hindrance. Quite literally, it opened new fields to the archeologist.

Extension of Gibraltar's underground defense system opened up several caves containing fossils of antlers, jaws, complete sets of teeth, and vertebrae, as well as pottery, stone tools, and other relics indicating that the caves were occupied from very early prehistoric times to Roman days.

Ancient Pottery Helps to Date a Temple

Examination of bomb craters in Canterbury, England, disclosed evidence of an ancient city probably built soon after the Roman conquest, A.D. 43. Pieces of pottery—some still showing the printer's mark—and the foundations of a villa and other buildings which were unearthed illuminate the colonial life of the ancient Romans. Diggings in Hampshire brought to light remains of Roman pottery, many ancient vases, and a ball of potter's clay bearing fingerprints. In craters of blitzed southeast London, Roman pottery and tools were uncovered.

Construction of airfields in England added new chapters to the island's ancient history. At one field were exposed traces of an ancient Celtic temple built of wood, a square within a square. From pottery unearthed there, it was estimated that the temple was probably built between 500 and 300 B.C. Other airfield construction brought to light a pair of gold earrings of the Bronze Age and a plaque of the Virgin and Child of 12th century workmanship.

In northwestern Spain were found relics of a Hispano-Roman settlement antedating 65 B.C.

A war of the second century B.C., during the reign of Ptolemy III, was evidently responsible for a temple discovered in Upper Egypt. Inscriptions indicate that it was built by one of Ptolemy's cavalry regiments encamped in that area. The excavation brought up fragments of a marble statue of Venus, and bronze plates and pottery.

A town built on 16 different levels, in northern Iraq, 250 miles from Baghdad, was reported by the University of Chicago. Stone axes, flint-toothed sickles, corrugated pottery husking trays, and underground grain bins were found. On nearly every level there were human remains, as well as bones of such domestic animals as sheep, pigs, and oxen. Beneath all was evidence of ancient nomadic life, traces of what may have been the foundations for tents.

Ancient Buildings Add History to the Holy Land

On Chukotski Peninsula, across Bering Sea from Alaska, ancient settlements similar to those on America's Arctic coast were explored. In central Asia, exploration divulged 30 hitherto unknown glaciers, and mountain peaks rising 21,000 feet in the Pamirs in the Tadzhik Soviet Socialist Republic. A new island in the Laptev Sea off northern Siberia was charted.

Diggings on the site of ancient Beth-Yerah, on the southern shore of the Sea of Galilee, disclosed ruins of buildings of pre-Christian periods. One house had a paved inner court surrounded by living rooms, kitchen, and store rooms. A Stone Age settlement, with flint axes, was discovered near Haifa, Palestine. In a cemetery in this area were found jewelry and other objects of gold, ivory, glass, and earthenware.

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Normally, more than half the world's output was produced in the United States, domestic recovery reaching about seven and one-half million pounds in 1943, the latest year for which figures are available. Colorado, Idaho (illustration, below), Montana, and Utah were credited with almost three-fourths of the total. Home production was not adequate for the year's needs of almost eight million pounds. Reserve stocks filled the gap. Nine-tenths of the supply is used in electroplating and in alloys for bearings.

Chief world producers, apart from the United States, have been Mexico, Germany, Canada, South-West Africa, Poland, Australia, Belgium, and Norway. War keyed production to high figures in all zinc-smelting countries, and increased Canada's total in 1941 by 30 per cent. In prewar years the United States imported metallic cadmium, and exported compounds.

Cadmium is put up in small round sticks, 12 inches long. For electroplating it is prepared in variously shaped anodes—the positive terminal of an electric source.

Bulletin No. 4, January 28, 1946.

Maynard Owen Williams

CADMIUM, SMALL IN THIS PICTURE, LACKS BULK BUT SPREADS THIN

The tiny slab on the near right-hand corner of the table is cadmium, 99.97 per cent pure. Plated over other metals it prevents rust. The obelisk to the right represents geologic strata in the Coeur d'Alene-Kellogg area of north Idaho, whose mines produced the cadmium, lead, zinc, and antimony exhibited on the table.

The seventh National Geographic Society-Smithsonian Institution archeological expedition to southern Mexico discovered in the highlands of southwestern Chiapas an ancient city of eight large mounds, one of which contained a stone temple. This new discovery indicates a migration from the Gulf coast of Olmec Culture, which antedated Mayan civilization but which existed along with it for some time. (The illustration below shows a discovery of a previous expedition.)

An ancient settlement was discovered at Bromme, on the island of Sjaelland (Zealand), by the Danish National Museum. Experts say it indicates that Denmark was inhabited by human beings when an Arctic climate like that of northern Siberia prevailed there.

A British pilot flying over Canada's Arctic islands reported that the North Magnetic Pole is several hundred miles north of Boothia Peninsula, the long accepted position. A ground expedition must verify the flyer's report.

Following a 14-summer botanical survey of the western United States, Dr. Basset Maguire, curator of the New York Botanical Garden, reported more than 100,000 plant specimens, covering more than 5,000 species.

Near Malta, Montana, on July 9, scientists recorded the first total eclipse of the sun visible in the United States since 1932. It could be seen through the clouds at that point for three minutes.

Note: For further information on exploration, see "Geography of the Jordan" in the *National Geographic Magazine* for December, 1944; "Greece—the Birthplace of Science and Free Speech," March, 1944; "On the Trail of King Solomon's Mines," February, 1944*; and "Discovering Alaska's Oldest Arctic Town," September, 1942*.

Bulletin No. 5, January 28, 1946.

Richard H. Stewart

TWO-TON COLUMNS WALL IN A PRE-COLUMBIAN TOMB AT LA VENTA, MEXICO

Block and tackle lifted the basalt pillars out. Members of the National Geographic Society-Smithsonian Institution expedition discovered no clue as to how La Venta's people, with no knowledge of the wheel, transported these heavy stones. Nearest basalt is 60 miles away.